

# Thermocouple Protection Tubes



## Material

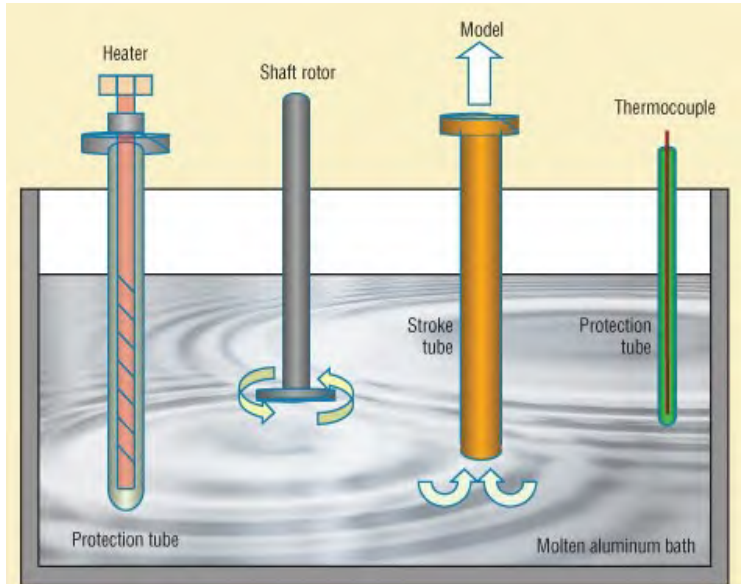
Silicon Nitride Bond Silicon Carbide (NSiC)

## Advantage

1. Excellent oxidation resistance
2. Good wear resistance
3. Excellent corrosion resistance
4. High temperature flexural performance
5. Excellent load bearing strength

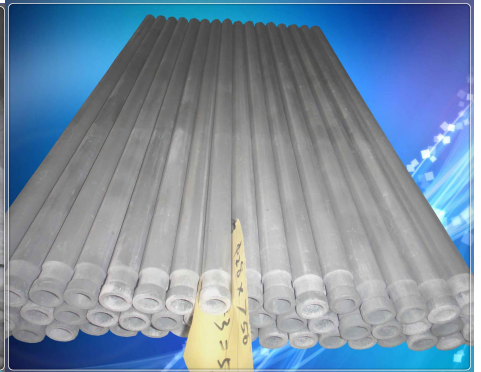
## Application

NSiC has excellent wear properties and is resistant to corrosion and erosion by molten metals. So that it can be used in direct contact with molten aluminum, zinc, copper, magnesium. NSiC has been successfully used for protection tubes for temperature measurement.



## Technical Data

Item	NSiC Index	Unit
Bulk Density	2.77--2.82	g/cm <sup>3</sup>
Porosity	10--12	%
Compression strength	600--700	Mpa
Bending strength	160--180	Mpa
Young's modulus	220--260	Gpa
Thermal conductivity	15	W/M.K
Thermal expansion $\alpha(20-1000^{\circ}\text{C})$	5	$10^{-6}\text{k}^{-1}$
Max.Working temperature	1500	$^{\circ}\text{C}$
Si <sub>3</sub> N <sub>4</sub>	20-40	%
SiC	60-80	%

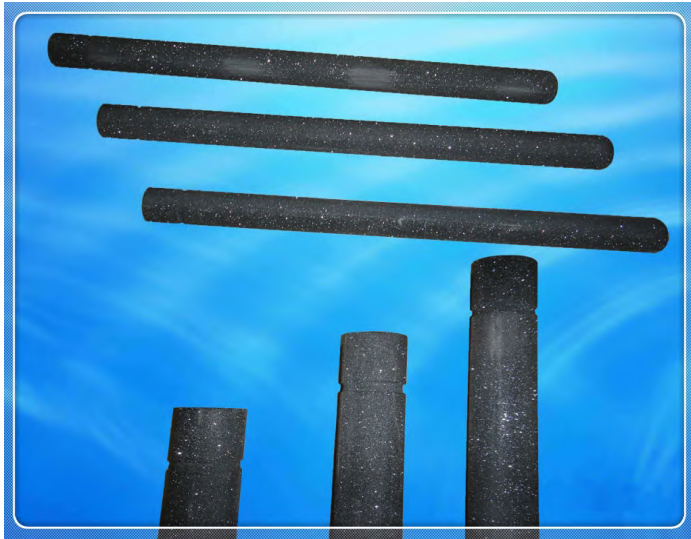


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# Thermocouple Protection Tubes



## Material

Recrystallized Silicon Carbide (RSiC)

## Advantage

1. Excellent thermal conductivity
2. Excellent thermal shock resistance
3. Excellent oxidation resistance
4. Excellent resistance to acid
5. Excellent heat resistance

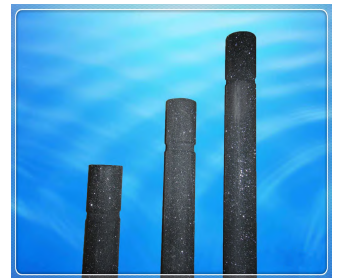
## Application

RSiC products with excellent properties of high temperature strength, light weight, good thermal conductivity, low heat retaining, long service life, RSiC products are widely used in the ceramic industry, petrochemical industry, aerospace industry etc. The RSiC products are typically used as kiln furnaces under high temperature, especially over 1250deg. It will obviously increase the efficiency of kiln loading and save energy.



## Technical Data

Item	RSiC Index	Unit
Bulk Density	2.60--2.74	g/cm <sup>3</sup>
Porosity	15	%
Compression strength	≥ 600	Mpa
Bending strength	90--100	Mpa
Young's modulus	240	Gpa
Thermal conductivity	24	W/M.K
Thermal expansion α(20-1000°C)	4.8	10 <sup>-6</sup> k <sup>-1</sup>
Max.Working temperature	1650	°C
α--SiC	98.5	%



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